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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,983

12/10/2003

Takahiro Esaki

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04/19/2006

WENDEROTH, LIND & PONACK, L.L.P.

2033 K STREET N. W.

SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

HUFFMAN, JULIAN D

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/730,983

Applicant(s)

ESAKI ET AL.

Examiner

Julian D. Huffman

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-13, 15-23, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 14 and 24-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9-13, 16-23 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al. (U.S. 20020008731 A1).

Matsumoto et al. discloses :

With regards to claims 9 and 17, a recording apparatus (fig. 9) comprising:

line heads (cyan, magenta, yellow heads), and each of said line heads for discharging a colored ink onto a recording medium traveling relative to said line heads in a transport direction,

wherein a first of said line heads is offset relative to a second of said line heads in a Y direction, perpendicular to the transport direction, by an amount that is almost equal to a value resulting from dividing a print width of an individual head of said line heads by a total number of different colors of ink to be discharged from said line heads (fig. 9, the first cyan line head is offset from the second magenta line head by an amount that is almost equal to a value resulting from dividing a print width of an individual head 22 by a total number of different colors of ink to be discharged, three, additionally, as taught in 0095, Matsumoto teaches that any number or combination of colors may be used) or by an amount such that when an image is formed from the

colored ink being discharged from said line heads a periodic change in density of the ink forming the image is visually dispersed more so than if said first and second line heads were not offset by said amount (Matsumoto at 0084 states that the offset arrangement enables accurate detection of print gap for each color and at 0007 Matsumoto states that the detection of the line heads provides recording free from a stripe shape nonuniformity, a blank defect and a color nonuniformity, and thus accordingly the offset provides a more visually dispersed image).

With regards to claims 10 and 21, a third of said line heads is offset relative to both said first and second of said line heads in the Y direction (fig. 9, yellow head).

With regards to claims 11, 19 and 22, said third of said line heads is offset relative to said second of said line heads in the Y direction by the amount that is almost equal to the value resulting from dividing the print width of the individual head of said line heads by the total number of different colors of ink to be discharged from said line heads (see explanation above, third yellow head is offset from second magenta head by the same amount as the second magenta head is offset relative to the first cyan head).

With regards to claims 12, 23 and 28, each of said line heads is for discharging a colored ink by discharging an ink that is different in color relative to an ink to be discharged from each of said line heads (fig. 9), and

each of said line heads includes individual heads (22) in the Y direction, with each of said individual heads having the same print width such that the print width of the individual head corresponds to a print width of any of said individual heads (fig. 9).

With regards to claims 13 and 18, each of said line heads includes individual heads in the Y direction, with each of said individual heads including discharge ports (20).

With regards to claim 16, 20 and 23, each of said line heads is for discharging a colored ink by discharging an ink that is different in color relative to an ink to be discharged from each other of said line heads (fig. 9), and

each of said line heads includes individual heads (22) in the Y direction, with each of said individual line heads having the same print width such that the print width of the individual head corresponds to a print width of any of said individual heads (fig. 9).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 15 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto.

Fig. 9 of Matsumoto discloses cyan, magenta and yellow and further at 0095 it is stated that any other combination of colors may be used.

Matsumoto does not expressly disclose the total number of different colors to be discharged from said line heads is three, and the different colors are cyan, magenta and black.

However, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a total of three colors, cyan, magenta and black, for the purpose of providing desired multicolor images (0095).

#### ***Allowable Subject Matter***

5. Claims 14 and 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

6. Applicant's arguments filed 1 February 2006 have been fully considered but they are not persuasive. Applicant argues that Matsumoto et al. does not disclose the offset amount almost equal to a value resulting from dividing a print width of an individual head of said line heads by a total number of different colors of ink to be discharged from said line heads. Due to the broad claim language "almost", fig. 9 of Matsumoto et al. discloses the first cyan line head offset from the second magenta line head by an amount that is almost equal to a value resulting from dividing a print width of an individual head 22 by a total number of different colors of ink to be discharged, three. Since the line heads are offset, the individual heads are also offset. Additionally, as taught in 0095, Matsumoto teaches that any number or combination of colors may be used.

***Conclusion***

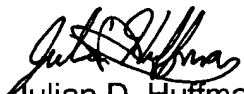
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 10:00a.m.-6:30p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Julian D. Huffman  
4 April 2006

  
K. FEGGINS  
PRIMARY EXAMINER